

MALAD RIVER BASIN

13141000 BIG WOOD NEAR BELLEVUE, ID--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970-1981, October 1989 to September 1990, November 1991 to September 1992, November 1993 to September 1994, April to September 1996.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| | | DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061) | SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095) | PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400) | TEMPER- ATURE AIR (DEG C) (00020) | TEMPER- ATURE WATER (DEG C) (00010) | TUR- BID- ITY (NTU) (00076) | OXYGEN, DIS- SOLVED (MG/L) (00300) | OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301) | COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625) | STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673) |
|--------------|--|--|--|---|---|--|--|---|--|---|--|
| APR 26... | 1200 | 498 | 265 | 8.2 | 14.0 | 8.0 | 0.6 | 10.0 | 100 | K4 | -- |
| MAY 20... | 1045 | 1660 | 203 | 8.3 | 11.0 | 6.0 | 18 | 11.4 | 110 | K10 | 40 |
| JUN 19... | 1345 | 1530 | 195 | 8.2 | 18.5 | 11.5 | 5.5 | 9.3 | 102 | K17 | 120 |
| JUL 11... | 1015 | 498 | 227 | 8.2 | 28.0 | 13.5 | 0.5 | 8.6 | 98 | 56 | 87 |
| AUG 21... | 1330 | 98 | 338 | 8.3 | 25.5 | 16.5 | 0.3 | 8.6 | 105 | 29 | 86 |
| SEP 10... | 1030 | 76 | 343 | 8.1 | 24.5 | 12.5 | 0.6 | 9.4 | 106 | 74 | 150 |
| | | | | | | | | | | | |
| DATE | HARD- NESS TOTAL (MG/L AS CACO3) (00900) | CALCIUM DIS- SOLVED (MG/L AS CA) (00915) | MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925) | SODIUM, DIS- SOLVED (MG/L AS NA) (00930) | SODIUM PERCENT (00932) | POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935) | BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440) | CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445) | ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410) | | |
| SEP 10... | 170 | 52 | 9.6 | 4.9 | 6 | 1.4 | 190 | 0 | 156 | | |
| | | | | | | | | | | | |
| DATE | SULFATE DIS- SOLVED (MG/L AS SO4) (00945) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950) | SILICA, DIS- SOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300) | SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301) | SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303) | SOLIDS, DIS- SOLVED (TONS PER DAY) (70302) | | | |
| SEP 10... | 14 | 1.8 | 0.3 | 16 | 197 | 194 | 0.27 | 40.2 | | | |
| | | | | | | | | | | | |
| DATE | NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613) | NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608) | NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS- PHORUS TOTAL (MG/L AS P) (00665) | PHOS- PHORUS ORTHOS- SOLVED (MG/L AS P) (00671) | SEDIMENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155) | | | | |
| APR 26... | <0.01 | 0.17 | <0.015 | <0.2 | <0.01 | <0.01 | 15 | 20 | | | |
| MAY 20... | 0.01 | 0.14 | 0.030 | 0.3 | 0.07 | 0.02 | 129 | 578 | | | |
| JUN 19... | <0.01 | 0.12 | 0.030 | 0.2 | 0.10 | <0.01 | 75 | 310 | | | |
| JUL 11... | -- | -- | -- | -- | 0.05 | -- | 11 | 15 | | | |
| AUG 21... | 0.01 | 0.79 | <0.015 | <0.2 | <0.01 | <0.01 | 5 | 1.3 | | | |
| SEP 10... | <0.01 | 0.08 | <0.015 | <0.2 | <0.01 | <0.01 | 5 | 1.0 | | | |

K Results based on counts outside ideal colony range.

MALAD RIVER BASIN

13141000 BIG WOOD NEAR BELLEVUE, ID--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970-1981, October 1989 to September 1990, November 1991 to September 1992, November 1993 to September 1994, April 1996 to September 1997 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June to September 1997 (discontinued).

REMARKS.--Missing data due to equipment malfunction.

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 20.1°C July 21, 1997.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 20.1°C July 21.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

| DATE | TIME | DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061) | SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095) | PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400) | TEMPER-ATURE AIR (DEG C) (00020) | TEMPER-ATURE WATER (DEG C) (00010) | TUR-BID-ITY (NTU) (00076) | OXYGEN, DIS-SOLVED (MG/L) (00300) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301) | COLI-FORM, FECAL, 0.7 UM-MF (COLS. / 100 ML) (31625) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673) |
|-----------|---|---|---|--|---|---|--|---|--|--|---|
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| APR 16... | 1045 | 569 | 287 | 8.1 | 16.0 | 4.0 | 0.55 | 11.2 | 103 | K10 | K64 |
| MAY 13... | 1115 | 3990 | 188 | 8.0 | 33.0 | 5.5 | -- | 10.0 | 95 | 80 | 170 |
| JUN 03... | 1030 | 4080 | 188 | 8.0 | 24.0 | 9.0 | 41 | 8.4 | 87 | 100 | 170 |
| JUL 15... | 1045 | 450 | 249 | 8.1 | 29.0 | 12.5 | 0.71 | 9.2 | 103 | K56 | K46 |
| AUG 19... | 1100 | 122 | 306 | 8.0 | 27.0 | 13.5 | 0.58 | 7.9 | 88 | K50 | K58 |
| SEP 11... | 1115 | 43 | 331 | 8.0 | 21.5 | 15.0 | 0.42 | 8.0 | 94 | 130 | 140 |
| DATE | HARD-NESS TOTAL (MG/L AS CACO3) (00900) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | SODIUM PERCENT (00932) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | BICAR-BONATE WATER WH FET FIELD MG/L AS HCO3 (00440) | CAR-BONATE WATER WH FET FIELD MG/L AS CO3 (00445) | ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410) | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| SEP 11... | 160 | 49 | 9.9 | 4.8 | 6 | 1.4 | 200 | 0 | 168 | | |
| DATE | SULFATE DIS-SOLVED (MG/L AS SO4) (00945) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303) | SOLIDS, DIS-SOLVED (TONS PER DAY) (70302) | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| SEP 11... | 13 | 1.7 | 0.32 | 15 | 192 | 196 | 0.26 | 22.1 | | | |
| DATE | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS-PHORUS TOTAL (MG/L AS P) (00665) | PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| APR 16... | <0.010 | 0.207 | <0.015 | <0.20 | 0.019 | <0.010 | 289 | 444 | | | |
| MAY 13... | <0.010 | 0.157 | <0.015 | 0.57 | 0.189 | 0.016 | 359 | 3870 | | | |
| JUN 03... | <0.010 | 0.116 | <0.015 | 0.41 | 0.163 | 0.012 | 236 | 2600 | | | |
| JUL 15... | <0.010 | 0.082 | <0.015 | <0.20 | <0.010 | <0.010 | 9 | 11 | | | |
| AUG 19... | <0.010 | 0.164 | 0.015 | <0.20 | 0.010 | 0.017 | 22 | 7.2 | | | |
| SEP 11... | <0.010 | 0.052 | <0.015 | <0.20 | <0.010 | <0.010 | 3 | 0.35 | | | |

K Results based on counts outside ideal colony range.

[illegible]

MALAD RIVER BASIN

13141000 BIG WOOD RIVER NEAR BELLEVUE, ID--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970-1981, October 1989 to September 1990, November 1991 to September 1992, November 1993 to September 1994, April 1996 to September 1997 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June to September 1997 (discontinued).

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 20.1 °C July 21, 1997.

COLLECTION METHODS.--Composite of 5, 0.25 m² samples. Richest targeted habitat--riffles, whole sample.

MESH SIZE.--425 um.

AVERAGE DEPTH.--0.24 m.

AVERAGE PERCENT SHADING.--22.

AVERAGE VELOCITY.--0.91 m/s.

SUBSTRATE EMBEDDEDNESS CLASS RANGE.--2-4.

PERCENT FINES RANGE.--0-10.

HABITAT QUALITY INDEX.--61.

REMARKS.--Nice riffles in reach. Damage on banks due to cattle grazing.

BIOLOGICAL DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
BENTHIC INVERTEBRATE COLLECTION DATA

| ORGANISM TAXON | DATE | NUMBER OF INDIV- IDUALS | PERCENT COMPO- SITION | FUNC- TIONAL FEEDING GROUP | POLLU- TION TOLER- ANCE VALUE |
|----------------------------------|--------|----------------------------------|-----------------------------|-------------------------------------|---|
| GENUS SPECIES | JUL 23 | | | | |
| NON-INSECTS | | | | | |
| Nematoda | | 4 | 0.35 | PA | 5 |
| Oligochaeta | | 2 | 0.18 | CG | 8 |
| Pisidium | | 2 | 0.18 | CG | 8 |
| Copepoda | | 2 | 0.18 | CG | 8 |
| Acar1 | | 2 | 0.18 | PA | 5 |
| EPHEMEROPTERA | | | | | |
| Acetrella turbida | | 11 | 0.88 | CG | 4 |
| Baetis tricaudatus | | 32 | 2.65 | CG | 6 |
| Diphetor hageni | | 30 | 2.48 | CG | 5 |
| Drunella coloradensis/flavilinea | | 8 | 0.71 | CG | 0 |
| Drunella doddsi | | 4 | 0.35 | CG | 0 |
| Ephemerella | | 2 | 0.18 | CG | 1 |
| Ephemerella inermis/infrequens | | 49 | 4.07 | CG | 1 |
| Serratella tibialis | | 51 | 4.25 | CG | 2 |
| Cinygmula | | 90 | 7.43 | SC | 4 |
| Epeorus-early instar | | 2 | 0.18 | SC | 0 |
| Epeorus albertae | | 8 | 0.71 | SC | 1 |
| Paraleptophlebia | | 2 | 0.18 | CG | 4 |
| PLECOPTERA | | | | | |
| Chloroperlidae | | 17 | 1.42 | PR | 1 |
| Perlodidae-early instar | | 4 | 0.35 | PR | 2 |
| Isoperla | | 2 | 0.18 | PR | 2 |
| Pteronarcella | | 21 | 1.77 | OM | 0 |
| TRICHOPTERA | | | | | |
| Brachycentrus americanus | | 81 | 6.73 | OM | 1 |
| COLEOPTERA | | | | | |
| Dytiscidae | | 11 | 0.88 | PR | 5 |
| Optioservus | | 2 | 0.18 | SC | 4 |
| DIPTERA | | | | | |
| Clinocera | | 2 | 0.18 | PR | 6 |
| Simulium | | 383 | 31.68 | CF | 6 |
| Cryptolabis | | 4 | 0.35 | UN | 4 |
| CHIRONOMIDAE | | | | | |
| Chironomidae-pupae | | 96 | 7.96 | UN | 6 |
| Cardiocladius | | 15 | 1.24 | PR | 5 |
| Cricotopus | | 11 | 0.88 | CG | 7 |
| Eukiefferiella | | 8 | 0.71 | OM | 8 |
| Micropectra | | 2 | 0.18 | CG | 7 |
| Orthocladius Complex | | 34 | 2.83 | CG | 6 |
| Orthocladius | | 195 | 16.11 | CG | 6 |
| Paracladius | | 2 | 0.18 | CG | 6 |
| Polypedilum | | 11 | 0.88 | OM | 6 |
| Tvetenia | | 2 | 0.18 | CG | 5 |
| TOTAL NUMBER OF TAXA | | 37 | | EPT ABUNDANCE | 417/m ² |
| TOTAL NUMBER OF ORGANISMS | | 1209/m ² | | NUMBER EPT TAXA | 17 |
| HILSENHOFF BIOTIC INDEX | | 4.78 | | SHANNON DIVERSITY INDEX (H) | 3.57 |

MALAD RIVER BASIN
13141000 BIG WOOD RIVER NEAR BELLEVUE, ID--Continued

COLLECTION METHODS.--Qualitative multiple habitat, relative abundance, whole sample.

MESH SIZE.--210 um.

GEAR TYPE.--D-frame net and visual collections.

REACH LENGTH.--NA.

AVERAGE WIDTH.--30 m.

HABITAT QUALITY INDEX.--61.

REMARKS.--Nice riffles in reach. Damage on banks due to cattle grazing.

BIOLOGICAL DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
BENTHIC INVERTEBRATE COLLECTION DATA

| ORGANISM TAXON GENUS SPECIES | DATE JUL 23 | NUMBER OF INDIV- IDUALS | PERCENT COMPO- SITION | FUNC- TIONAL FEEDING GROUP | POLLU- TION TOLER- ANCE VALUE |
|---|----------------|----------------------------------|-----------------------------|-------------------------------------|---|
| NON-INSECTS | | | | | |
| Acari | | 30 | 0.36 | PA | 5 |
| EPHEMEROPTERA | | | | | |
| <i>Acentrella turbida</i> | | 90 | 1.08 | CG | 4 |
| <i>Baetis tricaudatus</i> | | 150 | 1.8 | CG | 6 |
| <i>Diphetor hageni</i> | | 315 | 3.78 | CG | 5 |
| <i>Attenella margarita</i> | | 30 | 0.36 | CG | 2 |
| <i>Drunella coloradensis/flavilinea</i> | | 45 | 0.54 | CG | 0 |
| <i>Drunella doddsi</i> | | 30 | 0.36 | CG | 0 |
| <i>Ephemerella inermis/infrequens</i> | | 150 | 1.8 | CG | 1 |
| <i>Serratella tibialis</i> | | 135 | 1.62 | CG | 2 |
| <i>Timpanoga hecuba</i> | | 15 | 0.18 | CG | 7 |
| <i>Cinygmula</i> | | 555 | 6.65 | SC | 4 |
| <i>Epeorus albertae</i> | | 45 | 0.54 | SC | 1 |
| <i>Rhithrogena</i> | | 30 | 0.36 | SC | 0 |
| PLECOPTERA | | | | | |
| Chloroperlidae | | 15 | 0.18 | PR | 1 |
| <i>Hesperoperla pacifica</i> | | 15 | 0.18 | PR | 2 |
| <i>Pteronarcella</i> | | 30 | 0.36 | OM | 0 |
| TRICHOPTERA | | | | | |
| <i>Brachycentrus americanus</i> | | 90 | 1.08 | OM | 1 |
| <i>Lepidostoma-sand case larva</i> | | 30 | 0.36 | SH | 1 |
| COLEOPTERA | | | | | |
| Dytiscidae | | 15 | 0.18 | PR | 5 |
| <i>Optioservus</i> | | 15 | 0.18 | SC | 4 |
| DIPTERA | | | | | |
| Ceratopogoninae | | 15 | 0.18 | PR | 6 |
| <i>Simulium</i> | | 1530 | 18.35 | CF | 6 |
| <i>Hexatoma</i> | | 45 | 0.54 | PR | 2 |
| CHIRONOMIDAE | | | | | |
| Chironomidae-pupae | | 90 | 1.08 | UN | 6 |
| <i>Cardiocladius</i> | | 195 | 2.34 | PR | 5 |
| <i>Corynoneura</i> | | 45 | 0.54 | CG | 7 |
| <i>Cricotopus</i> | | 480 | 5.76 | CG | 7 |
| <i>Eukiefferiella</i> | | 390 | 4.68 | OM | 8 |
| <i>Nilotanytus</i> | | 45 | 0.54 | PR | 6 |
| <i>Odontomesa</i> | | 45 | 0.54 | CG | 4 |
| Orthocladiinae-early instar | | 45 | 0.54 | CG | 5 |
| <i>Orthocladius Complex</i> | | 435 | 5.22 | CG | 6 |
| <i>Orthocladius</i> | | 2775 | 33.27 | CG | 6 |
| <i>Rheotanytarsus</i> | | 45 | 0.54 | CF | 6 |
| <i>Tanytarsus</i> | | 45 | 0.54 | CF | 6 |
| <i>Thienemanniella</i> | | 45 | 0.54 | CG | 6 |
| <i>Tvetenia</i> | | 240 | 2.88 | CG | 5 |
| TOTAL NUMBER OF TAXA | 37 | | | EPT ABUNDANCE | 1770 |
| TOTAL NUMBER OF ORGANISMS | 8340 | | | NUMBER EPT TAXA | 17 |
| HILSENHOFF BIOTIC INDEX | 5.49 | | | SHANNON DIVERSITY INDEX (H) | 3.55 |